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TRANSMITTAL
FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/719,167
Filing Date	11/21/2003
First Named Inventor	Guo et al.
Art Unit	1713
Examiner Name	Peter D. Mulcahy
Attorney Docket Number	AD1325

19

ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
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Remarks		

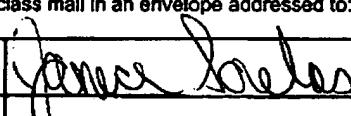
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Firm Name	Rohm and Haas Company		
Signature			
Printed name	Kim R. Jassum		
Date	August 18, 2006	Reg. No.	43,694

CERTIFICATE OF TRANSMISSION/MAILING

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Date

8-18-06

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Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).
FEE TRANSMITTAL
For FY 2005

Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 500.00)

Complete If Known

Application Number	10/719,167
Filing Date	11/21/2003
First Named Inventor	Guo et al.
Examiner Name	Peter D. Mulcahy
Art Unit	1713
Attorney Docket No.	A01325

METHOD OF PAYMENT (check all that apply)

Check Credit Card Money Order None Other (please identify): _____

Deposit Account Deposit Account Number: 18-1850 Deposit Account Name: Rohm and Haas Company

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

Charge fee(s) indicated below Charge fee(s) indicated below, except for the filing fee

Charge any additional fee(s) or underpayments of fee(s) Credit any overpayments

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

2. EXCESS CLAIM FEES

Fee Description

Each claim over 20 (including Reissues)

Each independent claim over 3 (including Reissues)

Multiple dependent claims

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims	
				Fee (\$)	Fee (\$)
- 20 or HP =	x	=		50	25
HP = highest number of total claims paid for, if greater than 20.				200	100

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims	
				Fee (\$)	Fee (\$)
- 3 or HP =	x	=			
HP = highest number of independent claims paid for, if greater than 3.					

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 =	/ 50 =	(round up to a whole number) x	=	

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Appeal Brief 500.00

SUBMITTED BY

Signature	Kim R. Jessum	Registration No. (Attorney/Agent) 43,694	Telephone 215-592-3000
Name (Print/Type)	<u>Kim R. Jessum</u>		Date 8/18/06

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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GROUP ART UNIT: 1713
APPEAL NO. _____

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES**

APPEAL BRIEF

In re the Application of Ching-Jen Chang et al.

Filed: November 21, 2003

Serial No. 10/719,167

For: MULTI-STAGE POLYMER COMPOSITIONS HAVING A TRIGGERED
RESPONSE

Kenneth Crimaldi
Attorney for Appellants

Peter D. Mulcahy
Examiner

Enclosed:
Transmittal Form

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November 21, 2003

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Ching-Jcn Chang et al. :

Application No.: 10/719,167 : Group No.: 1713
Filed: November 21, 2003 : Examiner: Peter D. Mulcahy

For: MULTI-STAGE POLYMER COMPOSITIONS HAVING A TRIGGERED
RESPONSE

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
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Alexandria, VA 22313-1450

APPEAL BRIEF

This is an appeal from the rejection dated June 2, 2006 finally rejecting claims 1, 3, 5 and 10. The rejected claims are set out in Appendix J. Appellants filed a Notice of Appeal pursuant to 37 C.F.R. § 1.191 on August 15, 2006.

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(C) Real Party In Interest

The owner of the present application and the invention contained therein is
ROHM AND HAAS COMPANY.

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(D) Related Appeals, Interferences or Judicial Proceedings

No appeals, interferences or judicial proceedings are known to Appellants, the Appellants' legal representative, or the assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(E) Status Of Claims

The status of the claims is as follows:

Claims pending: 1, 3, 5 and 10

Allowed claims: none

Claims objected to: none

Claims canceled: 2, 4 and 6-9

Claims rejected: 1, 3, 5 and 10

Claims on appeal: 1, 3, 5 and 10

Claims withdrawn from consideration by the Examiner: none.

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(F) Status Of Amendments

Appellants have not filed an amendment after final rejection in the present application.

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(G) Summary of Claimed Subject Matter

Claim 1: The present invention provides a triggered response barrier composition [page 4, line 25] comprising: one or more multi-stage emulsion polymers [page 7, lines 19-21] that comprise (a) 70-99 weight percent of an alkali soluble/swellable emulsion polymer as a first stage; and (b) 1 to 30 weight percent of a more cross-linked alkali soluble/swellable emulsion polymer or a non- alkali soluble/swellable emulsion polymer as a second stage [page 4, lines 8-11]; wherein the multi-stage emulsion polymer surrounds, encapsulates or forms a matrix with one or more active ingredients [page 4, lines 27-28] and the multi-stage emulsion polymer disperses, disintegrates, dissolves, destabilizes, swells, deforms, softens, flows or combinations thereof, releasing the one or more active ingredients to an aqueous system as a result of a change in ionic strength of the aqueous system [page 4, line 30 to page 5, line 3].

(H) Grounds of Rejection to be Reviewed on Appeal

Claims 1, 3, 5 and 10 stand rejected on the ground of nonstatutory obviousness-type double patenting over claims 1 and 3-10 and 1, 3, 9 and 10 of copending Application Nos. 10/348,375 and 10/619,061, respectively. Claims 1, 3, 5 and 10 stand rejected under 35 U.S.C. § 103(a) as being obvious over Sonnabend (U.S. Pat. No. 4,384,096) or Gassenmeier et al. (U.S. 2001/0031714).

I Argument

Regarding whether or not claims 1, 3, 5 and 10 are unpatentable over the aforementioned references:

(a) The Cited References Fail to Suggest at Least One Limitation of the Present Claims

All claim limitations must be taught or suggested in the prior art. *In re Royka*, 490 F.2d 981 (C.C.P.A. 1974). At least three key limitations of independent claim 1 are not taught or suggested in any of the cited references, namely: (i) “multi-stage emulsion polymers;” (ii) “70-99 weight percent of an alkali soluble/swellable emulsion polymer as a first stage;” and (iii) “1 to 30 weight percent of a more cross-linked alkali soluble/swellable emulsion polymer or a non- alkali soluble/swellable emulsion polymer as a second stage.” The references do nothing to suggest the use of any multi-stage emulsion polymers, much less the specific limitations on Appellants’ polymers, as quoted above.

The final Office Action asserts only that the polymers recited in the claims “overlap in scope” with those of the references as to their constituent monomers, and that the prior art polymers “share the same structure and composition as those claimed.”

However, the present claims recite “multi-stage emulsion polymers,” i.e., polymers produced by sequential polymerization in stages, during which different monomer mixtures are added, producing a polymer whose surface composition differs from its internal composition (see present application, p. 7, line 19 to p. 8, line 5). The claims also recite a first stage which is “70-99 weight percent of an alkali soluble/swellable” polymer, and a second stage which is “1 to 30 weight percent of a more cross-linked” polymer. None of the references discloses or suggests any kind of multi-stage polymer, much less one having the particular first and second stages recited in the present claims.

Sonnabend discloses “an aqueous emulsion copolymer of” three types of monomers (Col. 2, lines 5-56). Nowhere in this description is there any suggestion of separate stages or varying monomer compositions during polymerization, and the

polymer is referred to simply as a “copolymer” of the constituent monomers. Columns 6 and 7 describe copolymerization and copolymer properties, again without referring to stages or varying monomer composition. Blending of different copolymers is suggested at column 6, lines 61-64, but this refers to two separate polymers, not a single multi-stage polymer. Moreover, Example 2 describes the “typical procedures” for preparation of the polymers, and lists a single “monomer mix” containing all of the monomers.

Likewise, Gassenmeier, et al. discloses copolymers without suggesting separate stages or varying monomer composition (paragraphs [0060]-[0061]). The copolymer is made “by copolymerizing conventional basic monomers” of three types (paragraphs [0186]-[0189]). No details are provided as to the polymerization process, and there is no suggestion anywhere of polymerization in separate stages. Therefore, neither Sonnabend nor Gassenmeier, et al. can suggest the multi-stage polymers recited in the present claims.

Finally, none of the claims of the cited copending applications discloses or suggests the multi-stage polymers recited in the present claims. Therefore, Appellants respectfully submit that the invention as presented herein is patentable over the prior art of record.

(b) The Cited References Fail to Provide a Motivation to Modify Their Disclosure

A *prima facie* case of obviousness requires that the cited references provide a motivation to modify their teachings to produce the claimed invention. *In re Kotzab*, 217 F.3d 1365 (Fed. Cir. 2000). The Advisory Action mailed August 7, 2006 acknowledges that the references are “silent to ‘multi-stage’ polymerization,” but asserts that multi-stage polymers are “within the scope of the teaching of the art and rendered *prima facie* obvious.”

Nothing in the references suggests use of multi-stage emulsion polymerization, much less the particular first and second stages recited in the present claims. Sonnabend describes “typical procedures for the preparation of the liquid emulsion polymers” (Example 2), in which all of the monomers are contained in a single mixture, so that the variation in monomer composition required in multi-stage polymerization would be

impossible. Gassenmeier et al. contains no specific disclosure of any polymerization process. Neither reference, nor the claims of the cited copending applications, provide the required motivation to modify their teachings so as to use multi-stage polymers. The standard applied in the Advisory Action would make any polymer composition using known monomers obvious over any reference that mentioned polymerization of those monomers, because any such reference presumably would have "within the scope of [its] teaching" all possible polymers that could be prepared from the monomers. This standard is at odds with Federal Circuit precedent requiring that the references suggest the particular claim limitations or provide motivation to modify their teachings to produce the claimed invention.

Therefore, Appellants respectfully submit that the Office has not met its burden of demonstrating that the prior art suggests modification of its disclosures to produce the limitations of the claims.

(c) One Skilled in the Art Would Have Had No Reasonable Expectation of Success

A *prima facie* case of obviousness requires that one skilled in the art would have had a reasonable expectation of success in light of the prior art. *In re Dow Chemical*, 837 F.2d 469 (Fed. Cir. 1988). The Office has provided no evidence that one skilled in the art would have had a reasonable expectation that multi-stage polymers of the type recited in the present claims would function well as barrier compositions. First, as described in parts (a) and (b) above, the references simply do not suggest the claim limitations of the invention at all. Second, even if they had, there is nothing in the references that could suggest that the particular multi-stage polymers claimed by Appellants would be effective, and accordingly, the Office has not established a *prima facie* case of obviousness.

(d) Applicants Have Obtained Unexpected Results

Even if the Office had established a *prima facie* case of obviousness, it could be overcome by a showing of unexpected results. *In re Soni*, 54 F.3d 746 (Fed. Cir. 1995).

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Appellants have disclosed in the present application (see Example 2, page 35) that multi-stage polymers within the scope of their claims have superior properties as barrier compositions, compared to single-stage polymers. Nothing in the references suggests that this result could have been obtained. Therefore, Appellants respectfully submit that the results presented in Example 2 were unexpected, and would refute a *prima facie* case of obviousness.

CONCLUSION

Based on the foregoing, Appellants respectfully submit that the pending claims are currently in condition for allowance. Appellants respectfully request the Board to pass the pending claims to allowance.

Enclosed herewith, Appellants have filed a Certificate of Mailing to establish the timely filing of this Appeal Brief.

The Commissioner is hereby authorized to charge any additional fee which may be required, or to credit any overpayments to Deposit Account 18-1850.

Respectfully submitted,



Kenneth Crimaldi
Attorney for Appellants
Registration No. 40,968

ROHM AND HAAS COMPANY
100 Independence Mall West
Philadelphia, PA 19106-2399
August 17, 2006

(J) Claims Appendix

1. A triggered response barrier composition comprising: one or more multi-stage emulsion polymers that comprise (a) 70-99 weight percent of an alkali soluble/swellable emulsion polymer as a first stage; and (b) 1 to 30 weight percent of a more cross-linked alkali soluble/swellable emulsion polymer or a non- alkali soluble/swellable emulsion polymer as a second stage; wherein the multi-stage emulsion polymer surrounds, encapsulates or forms a matrix with one or more active ingredients and the multi-stage emulsion polymer disperses, disintegrates, dissolves, destabilizes, swells, deforms, softens, flows or combinations thereof, releasing the one or more active ingredients to an aqueous system as a result of a change in ionic strength of the aqueous system.
3. The triggered response barrier composition according to claim 1, wherein the aqueous system is a fabric washing or cleaning system and wherein the one or more active ingredients are selected from the group consisting of: fabric softeners, fabric softener formulations, cationic, anionic, amphoteric and non-ionic surfactants, fragrances and combinations thereof.
5. The triggered response barrier composition according to claim 1, wherein the multi-stage emulsion polymer first stage is prepared by polymerizing one or more monomers selected from the group consisting of: acrylic acid, methacrylic acid, ethyl acrylate, ethyl methacrylate, methyl methacrylate, 2-ethylhexyl acrylate, butyl acrylate, butyl methacrylate, 2-hydroxyethyl acrylate, 2-hydroxybutyl methacrylate; styrene, vinyltoluene, t-butylstyrene, isopropylstyrene, and p-chlorostyrene; vinyl acetate, vinyl butyrate, vinyl caprolate; acrylonitrile, methacrylonitrile, butadiene, acrylic or methacrylic acid esters of a C₁₂-C₂₄ alkyl monoether of a polyalkylene glycol having from 6 to 70 oxyalkylene units, cetyl-stearyl(ethyleneoxide)₂₀ methacrylate and diallyl phthalate and wherein the multi-stage emulsion polymer second stage is prepared by polymerizing one or more monomers selected from the

group consisting of: methylmethacrylate, styrene, allylmethacrylate, diallyl phthalate and butylene glycol diacrylate.

10. The triggered response barrier composition according to claim 1, having 80-95 weight percent of the alkali soluble/swellable emulsion polymer, which has 0.01-5 weight percent of one or more polyethylenically unsaturated monomer units; and 5-20 weight percent of the more cross-linked alkali soluble/swellable emulsion polymer, which has 0.1-10 weight percent of one or more polyethylenically unsaturated monomer units.

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(K) Evidence Appendix

No evidence was submitted during prosecution.

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(L) Related Proceedings Appendix

There are no related proceedings.